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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,973	04/18/2006	Ashok Rao	100325.0199US	8080

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EXAMINER

AKRAM, IMRAN

ART UNIT	PAPER NUMBER
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1795

MAIL DATE	DELIVERY MODE
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05/08/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/541,973	Applicant(s) RAO ET AL.	
	Examiner IMRAN AKRAM	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 1-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 5/1/09 have been fully considered but they are not persuasive. The amendment does not overcome the anticipation of the Rudolph reference.
2. Applicant has again argued that the Rudolph reference teaches away from the claimed invention. This is not germane to a rejection under 102. See MPEP 2131.05. Whether or not feed syngas of Rudolph includes water is irrelevant given the claim language. Applicant does not claim that water does not exist in the syngas. Applicant claims that only the first portion has steam added into it after the syngas is split—which is the case for the process of Rudolph as shown in the rejection below. Steam is added so as to support the shift reaction as claimed. Also, the second portion is bypassed around the first shift reactor as the figure shows. The preamble language of "a method for reducing steam consumption" is not given any patentable weight. Rudolph discloses all the claimed features and so anticipates the rejection the same as it did in the previous office action.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 9-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Rudolph (US 4,161,393).
5. Regarding claim 9, Rudolph discloses providing a first shift reactor **17** and a second shift reactor **22**; splitting a syngas from a gasification unit into a first portion **2** and a second portion **20** (column 3, lines 25-27), combining only the first portion with steam (in **10**) sufficient to support a shift reaction to form a steam-containing first portion, (column 3, lines 35-42), and feeding the steam-containing first portion to the first shift reactor to form a first shift reactor effluent (column 3, lines 43-48); bypassing the second portion around the first shift reactor (see figure) and combining the first shift reactor effluent with the second portion to form a mixed feed gas (column 3, lines 49-52), and reacting the mixed feed gas in the second shift reactor to form a second shift reactor effluent (column 3, lines 52-55); wherein the second portion is combined with the first shift reactor effluent in an amount effective to reduce steam consumption in the first and second shift reactors (column 1, lines 20-25); and operating the first and second shift reactors at about the same temperature (column 1, lines 59-68).
6. Regarding claims 10 and 11, Rudolph discloses that the second portion of the syngas is combined with the first shift reactor effluent in an amount effective to reduce steam demand by at least 35% (column 2, lines 60-68).
7. Regarding claim 12, Rudolph discloses that the second portion has a volume of 50 to 91 volume percent of the syngas from the gasification unit (column 1, lines 59-62).
8. Regarding claim 13, Rudolph discloses providing a bypass **23** that combines a third portion of the syngas with the second shift reactor effluent (column 3, lines 55-57).

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9. Regarding claim 14, Rudolph discloses that the syngas includes carbon monoxide and hydrogen in a molar ratio of at least 2:1 (column 4, lines 31-36).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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13. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rudolph as applied to claim 9 above, and further in view of Schmid (US 4,159,236).

14. Rudolph discloses a third shift reactor **24** that inputs the effluent of the second shift reactor for the removal of CO, but does not disclose the use of an acid removal unit. Schmid--in an invention for a gasification process--discloses a shift reactor/acid gas removal unit combination as well as an additional acid gas removal unit for the removal of CO, CO₂, and H₂ (column 10, line 67 to column 11, line 6). It would have been obvious to one having ordinary skill in the art at the time of invention to replace the third shift reactor of Rudolph with the shift reactor/acid removal unit of Schmid or to add the acid removal unit of Schmid to Rudolph to separate out the undesirable products.

Conclusion

15. This is a RCE. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to IMRAN AKRAM whose telephone number is (571)270-3241. The examiner can normally be reached on 10-7 Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on 571-272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

IA

/Alexa D. Neckel/

Supervisory Patent Examiner, Art Unit 1795